unnecessary delay and expense to Applicants and duplicative examination by the Patent Office.

The pending claims, based on the amendment herein, are claims 1-11 and 15-23. Device claims 1-11 and method claims 15-23 read on the elected species. Device claim 1 is generic with respect to device claims 2-11. Method claim 15 is generic with respect to method claims 16-23. Applicants respectfully believe that all amended claims and all new claims are each within the scope of the species elected herein.

Applicants note that claims 2-11 depend from independent claim 1 and are therefore allowable if claim 1 is allowable. Applicants further note that claims 16-23 depend from independent claim 15 and are therefore allowable if claim 15 is allowable

PRELIMINARY AMENDMENT

Please amend the above-referenced patent application as follows:

In the Claims:

Please cancel claims 12-14. Please add new claims 21-23. Claims 1-11 and 15-20 are amended herein, as marked up in Appendix A. Currently pending claims 1-11 and 15-23 for consideration by the Examiner are as follows:

1. (Amended) A device adapted to function as an antifuse, said device comprising:

a first conductor;

a second conductor; wherein the first conductor is positioned above the second conductor; and

an insulator disposed between said first and second conductors, wherein the first conductor

has an intersection perimeter that comprises edges portions of the first conductor, wherein the edges portions of the first conductor are positioned directly above the second conductor, wherein a minimum voltage between the first and second conductors is required to create a current path between the first and second conductors through the insulator layer, and wherein the current path created by a voltage that is not less than the minimum voltage is more likely to traverse the insulator layer essentially at the intersection perimeter than elsewhere.

2. (Amended) The device of claim 1, wherein the insulator layer is thinner directly beneath the edge perimeter than elsewhere beneath the first conductor.

B2
A1
Cont.

3. (Amended) The device of claim 1, wherein the first conductor comprises a gate material, wherein the second conductor comprises a doped region, and wherein the doped region is more highly doped directly beneath the edge perimeter than elsewhere beneath the first conductor.

4. (Amended) The device of claim 1, wherein the minimum voltage is equal to about a burn-in voltage for reliability testing of the device, and wherein the burn-in voltage exceeds a normal operating voltage for the device.

5. (Amended) The device of claim 1, wherein the current path is oriented essentially perpendicular to both the first and second conductors.

6. (Amended) The device of claim 1, wherein the first conductor comprises a first plurality of

fingers, wherein the fingers of each pair adjacent fingers of the first plurality of fingers are separated by a gap, wherein the fingers of the first plurality of fingers are each oriented in a first direction, and wherein the intersection perimeter comprises line segments coinciding with edge portions of the first plurality of fingers, and wherein the line segments are each oriented in essentially the first direction.

7. (Amended) The device of claim 6, wherein the gap between adjacent fingers of the first plurality of fingers exposes a portion of said second conductor.

B2

A1 CONT.

8. (Amended) The device of claim 6, wherein each finger of the first plurality of fingers has essentially a same width in a second direction that is essentially perpendicular to the first direction.

9. (Amended) The device of claim 6, wherein the second conductor comprises a second plurality of fingers, wherein the fingers of each pair adjacent fingers of the second plurality of fingers are separated by a gap, wherein the fingers of the second plurality of fingers are each oriented in a second direction, and wherein the second direction is essentially perpendicular to the first direction.

10. (Amended) The device of claim 1, wherein the second conductor comprises a plurality of fingers, wherein the fingers of each pair adjacent fingers of the plurality of fingers are separated by a gap, wherein the intersection perimeter comprises line segments oriented in a first direction,

wherein the fingers of the plurality of fingers are each oriented in a second direction that is essentially perpendicular to the first direction.

A+

11. (Amended) The device of claim 10, wherein a first finger of the plurality of fingers has a first

B2 width in the first direction, wherein a second finger of the plurality of fingers has a second width in the first direction, and wherein the second width is unequal to the first width.

15. (Amended) A method for increasing the statistical programming of an antifuse, said method comprising the steps of:

forming a first conductor and a second conductor separated by a dielectric layer, wherein

B2 the first conductor is positioned above the second conductor, wherein the first conductor has an intersection perimeter that comprises edges portions of the first conductor wherein the edges

A2 portions of the first conductor are positioned directly above the second conductor, wherein a minimum voltage between the first and second conductors is required to create a current path between the first and second conductors through the dielectric layer; and

increasing the length of the intersection perimeter.

16. (Amended) The method of claim 15, wherein said step of increasing the length of the intersection perimeter comprises the step of forming a plurality of fingers in at least one of said first and second conductors by patterning and etching, and wherein the fingers of each pair adjacent fingers of the plurality of fingers are separated by a gap.

17. (Amended) The method of claim 16, further comprising doping the second conductor to form a doped region in the first conductor, wherein the doped region is more highly doped directly beneath the edge perimeter than elsewhere beneath the first conductor.

A2 Cont. B2

18. (Amended) The method of claim 15, further comprising the step of applying a programming voltage not less than the minimum voltage to create the current path between the first and second conductors through the dielectric layer, wherein the current path created by the programming voltage is more likely to traverse the dielectric layer essentially at the intersection perimeter than elsewhere.

19. (Amended) The method of claim 18, wherein the dielectric layer is thinner directly beneath the edge perimeter than elsewhere beneath the first conductor.

20. (Amended) The method of claim 16, wherein the step of forming a plurality of fingers comprises forming a first plurality of fingers integrally with the first conductor, wherein the fingers of each pair adjacent fingers of the first plurality of fingers are separated by a gap, wherein the fingers of the first plurality of fingers are each oriented in a first direction, and wherein the intersection perimeter comprises line segments coinciding with edge portions of the first plurality of fingers, and wherein the line segments are each oriented in essentially the first direction.

A3 B2

21. (New) The method of claim 20, wherein the the step of forming a plurality of fingers further

comprises forming a second plurality of fingers integrally with the second conductor, wherein the fingers of each pair adjacent fingers of the second plurality of fingers are separated by a gap, wherein the fingers of the second plurality of fingers are each oriented in a second direction, and wherein the second direction is essentially perpendicular to the first direction.

22. (New) The method of claim 16, wherein the the step of forming a plurality of fingers comprises forming a plurality of fingers integrally with the second conductor, wherein the fingers of each pair adjacent fingers of the plurality of fingers are separated by a gap, wherein the intersection perimeter comprises line segments oriented in a first direction, wherein the fingers of the plurality of fingers are each oriented in a second direction that is essentially perpendicular to the first direction.

23. (New) The method of claim 18, wherein the current path is oriented essentially perpendicular to both the first and second conductors.

REMARKS

Please cancel claims 12-14. Please add new claims 21-23. Claims 1-11 and 15-20 are amended herein, as marked up in Appendix A. Currently pending claims 1-11 and 15-23 for consideration by the Examiner. Claims 12-14 are cancelled herein. Claims 21-23 are new. Claims 1-11 and 15-20 are amended herein.